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4, 7TH MAIN MALLESWARAM, BANGALORE -3
Certificate No.: TC-5548

TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID	:	**CP-RW-2022-01-29-38** **Date: 06-10-21**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Filling of pot Holes at Ramachandrapura area in Ward No.10 Doddabommasandra Vidyaranyapura Sub Division.
Agency	:	M/s SS Enterprises Prop.Nagaraja.M #No.730, 1st Floor, 62nd Cross, 5th Block, Rajajinagara, Bangalore-560010
Customer Reference	:	BBMP/EE/BTP/WO/26/2021-22
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	04-10-21
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of Test	:	04-10-21

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	300.2	300.2
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	73.9	74.0
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	225.9	225.8
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.4	0.4
5	Aggregate impact value	(B/A)*100	24.6	24.7
6	Aggregate impact value (Mean of two tests)	Pecentage	24.6	

AE to JE

* The results obtained are satisfactory as per standard requirements.

Note:-

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

Smitha .N L
AE to JE

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com
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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2022-01-29-38** **Date: 06-10-21**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Filling of pot Holes at Ramachandrapura area in Ward No.10 Doddabommasandra Vidyaranyapura Sub Division.
Agency	:	M/s SS Enterprises Prop.Nagaraja.M #No.730, 1st Floor, 62nd Cross, 5th Block, Rajajinagara, Bangalore-560010
Customer Reference	:	BBMP/EE/BTP/WO/26/2021-22
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	04-10-21
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of Test	:	04-10-21

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	12.8%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.5%	
Combined Flakiness and Elongation Index for WMM	25.3%	

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Quality Manager

Sweetha.N.K
AE W10

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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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TEST RESULTS OF GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2022-01-29-38**	**Date: 13-10-21**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.	
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.	
Project Name	:	Filling of pot Holes at Ramachandrapura area in Ward No.10 Doddabommasandra Vidyaranyapura Sub Division.	
Agency	:	M/s SS Enterprises Prop.Nagaraja.M #No.730, 1st Floor, 62nd Cross, 5th Block, Rajajinagara, Bangalore-560010	
Customer Reference	:	BBMP/EE/BTP/WO/26/2021-22	
Source of Sample	:	Sample supplied by Agency	
Sample Condition	:	Satisfactory	
Date of Receipt	:	11-10-21	
Type of Mix	:	BC-Plant (Bituminous Concrete)	
Date of Test	:	11-10-21	
Oven Dry Weight	:	5000 Grams	

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-17(grading-2)
19	0	0	0.0	100.0	100
13.2	21	21	0.4	99.6	90-100
9.5	688	709	14.2	85.8	70-88
4.75	1224	1933	38.7	61.3	53-71
2.36	799	2732	54.6	45.4	42-58
1.18	379	3111	62.2	37.8	34-48
0.6	349	3460	69.2	30.8	26-38
0.3	489	3949	79.0	21.0	18-28
0.15	401	4350	87.0	13.0	12-20
0.075	428	4778	95.6	4.4	4-10
PAN	222	5000	100	0.0	0

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Suvitha. N.R
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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR BITUMINOUS CONCRETE

Lab ID	:	**CP-RW-2022-01-29-38** **Date: 14-10-21**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Filling of pot Holes at Ramachandrapura area in Ward No.10 Doddabommasandra Vidyaranyapura Sub Division.
Agency	:	M/s SS Enterprises Prop.Nagaraja.M #No.730, 1st Floor, 62nd Cross, 5th Block, Rajajinagara, Bangalore-560010
Customer Reference	:	BBMP/EE/BTP/WO/26/2021-22
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	11-10-21
Type of Mix	:	BC (Bituminous Concrete)
Date of Test	:	11-10-21

Table 500-16 : Physical Requirements fo Coarse Aggregate for Bituminous Concrete

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	10.7	Combined Flakiness & Elongation Index for BC is Maximum 35%	IS:2386 Part I
	Elongation Index	11.7		
Strength	Aggregate Impact Value	22.6	Maximum 24%	IS:2386 Part IV
Specific gravity	Specific gravity	2.54	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.32	Maximum 2%	IS:2386 Part III

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Authorized Signatory
Quallity Manager

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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	**CP-RW-2022-01-29-38**	**Date: 19-10-21**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.	
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.	
Project Name	:	Filling of pot Holes at Ramachandrapura area in Ward No.10 Doddabommasandra Vidyaranyapura Sub Division.	
Agency	:	M/s SS Enterprises Prop.Nagaraja.M #No.730, 1st Floor, 62nd Cross, 5th Block, Rajajinagara, Bangalore-560010	
Customer Reference	:	BBMP/EE/BTP/WO/26/2021-22	
Source of Sample	:	Sample supplied by Agency	
Date of Receipt	:	18-10-21	
Type of Mix	:	BC (Bituminous Concrete)	
Date of Test	:	18-10-21	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	471	472
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	5.80	5.60
4	Average percentage	%	5.7	

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Authorized Signatory
Quality Manager

Suvitha. N R
AE&10

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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Lab ID : CP-RW-2022-01-29-38 **Date: 19-10-21**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 471

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	5	5	1.1	98.9	90-100
9.5	99	104	22.1	77.9	70-88
4.75	103	207	43.9	56.1	53-71
2.36	51	258	54.8	45.2	42-58
1.18	26	284	60.3	39.7	34-48
0.6	21	305	64.8	35.2	26-38
0.3	53	358	76.0	24.0	18-28
0.15	38	396	84.1	15.9	12-20
0.075	42	438	93.0	7.0	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 472

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	8	8	1.7	98.3	90-100
9.5	101	109	23.1	76.9	70-88
4.75	106	215	45.6	54.4	53-71
2.36	53	268	56.8	43.2	42-58
1.18	25	293	62.1	37.9	34-48
0.6	23	316	66.9	33.1	26-38
0.3	54	370	78.4	21.6	18-28
0.15	32	402	85.2	14.8	12-20
0.075	31	433	91.7	8.3	4-10

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

AE 10

End of Report

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID	:	**CP-RW-2022-01-29-38** **Date: 19-10-21**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Filling of pot Holes at Ramachandrapura area in Ward No.10 Doddabommasandra Vidyaranyapura Sub Division.
Agency	:	M/s SS Enterprises Prop.Nagaraja.M #No.730, 1st Floor, 62nd Cross, 5th Block, Rajajinagara, Bangalore-560010
Customer Reference	:	BBMP/EE/BTP/WO/26/2021-22
Sample Condition	:	Satisfactory
Date of Receipt	:	18-10-21
Type of Mix	:	Tack coat
Date of Test	:	18-10-21

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.803	0.771
5	Weight of tack Coat (d=c-b)	Kg	0.023	0.023
6	Rate of spread of tack coat	Kg/sq.m	0.256	0.256
7	Average	Kg/sq.m	0.256	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

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Quality Manager

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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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Certificate No.: TC-5548

QC ABSTRACT

NAME OF WORK: Filling of pot Holes at Ramachandrapura area in Ward No.10 Doddabommasandra Vidyaranyapura Sub Division.

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	WMM	Sieve Analysis	One Test		1	1
		Impact Value	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
2	BC	SIEVE ANALYSIS	One Test		1	1
		STRIPPING VALUE	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		IMPACT VALUE	One Test		1	1
		Specific gravity	One Test		1	1
		Water Absorption	One Test		1	1
		Marshal Stability	One Test		1	1
		Marshal flow	One Test		1	1
		Percent air Voids	One Test		1	1
		Percent Voids in mineral	One Test		1	1
		Percent Voids filled with Bitumen	One Test		1	1
		Density	One Test		1	1
		Gradation	One Test		1	1
3	BITUMEN	Ductility	One Test		1	1
		Softening Point	One Test		1	1
		Penetration	One Test		1	1
		Flash Point	One Test		1	1
		Fire Point	One Test		1	1
4	TACK COAT	Rate of spread	One Test		1	1

Sunitha.N.L
AE W10

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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TEST RESULTS OF GRADATION FOR WMM

Lab ID	:	**CP-RW-2022-01-29-38** **Date: 06-10-21**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Filling of pot Holes at Ramachandrapura area in Ward No.10 Doddabommasandra Vidyaranyapura Sub Division.
Agency	:	M/s SS Enterprises Prop.Nagaraja.M #No.730, 1st Floor, 62nd Cross, 5th Block, Rajajinagara, Bangalore-560010
Customer Reference	:	BBMP/EE/BTP/WO/26/2021-22
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	04-10-21
Type of Mix	:	WMM (Wet Mix Macadam)
Date of Test	:	04-10-21
Oven Dry Weight	:	10500 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	298	298	2.8	97.2	95-100
22.4	2078	2376	22.6	77.4	60-80
11.2	2314	4690	44.7	55.3	40-60
4.75	2098	6788	64.6	35.4	25-40
2.36	1987	8775	83.6	16.4	15-30
0.6	547	9322	88.8	11.2	8-22
0.075	678	10000	95.2	4.8	0-5

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Quality Manager

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Assistant Executive Engineer
Vidyaranyapura Sub Division.
BBMP, Bangalore - 97

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